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(54) **POROUS MATERIAL HAVING MICROPORES CAPABLE OF STORING AND RELEASING HEAT BY PHASE CHANGE AND PREPARATION METHOD THEREOF**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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(57) **ABSTRACT**

The present invention provides a porous material having micropores capable of storing and releasing heat by phase change, which comprises a phase change material inserted into the micropores of a porous material medium such as activated carbon or silica gel so as to be capable of storing and releasing energy, and a preparation method thereof. The method comprises the steps of: pre-treating a porous material medium to remove impurities from the micropores of the porous material medium, thereby opening the micropores; pre-treating a phase change material to make it possible to insert the phase change material into the micropores of the porous material medium; inserting the pretreated phase change material into the pretreated porous material medium; filtering the porous material medium filled with the phase change material to remove the phase change material remaining after the insertion step; and washing the filtered material.

15 Claims, 6 Drawing Sheets